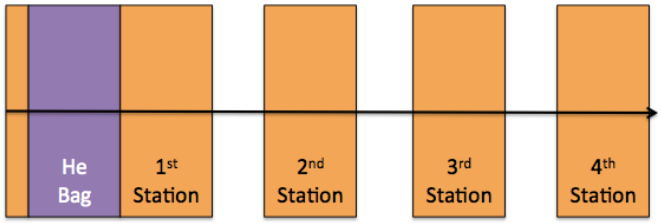
Neutron Detector Simulation For $LAMPS_H$



- Neutron Detector Array (NDA)
- Outline for the next simulation

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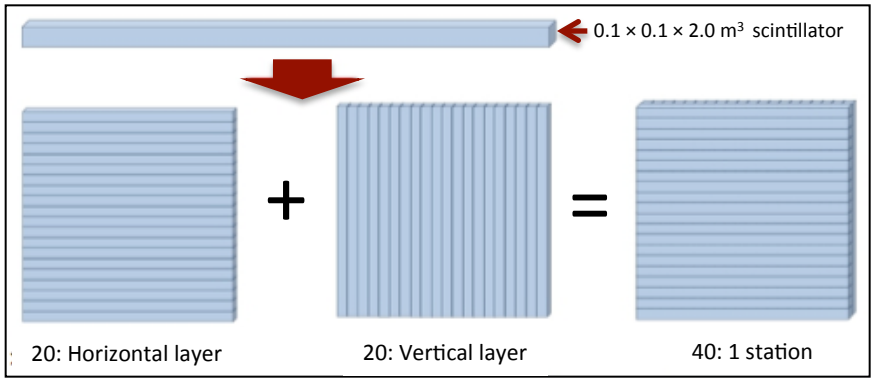
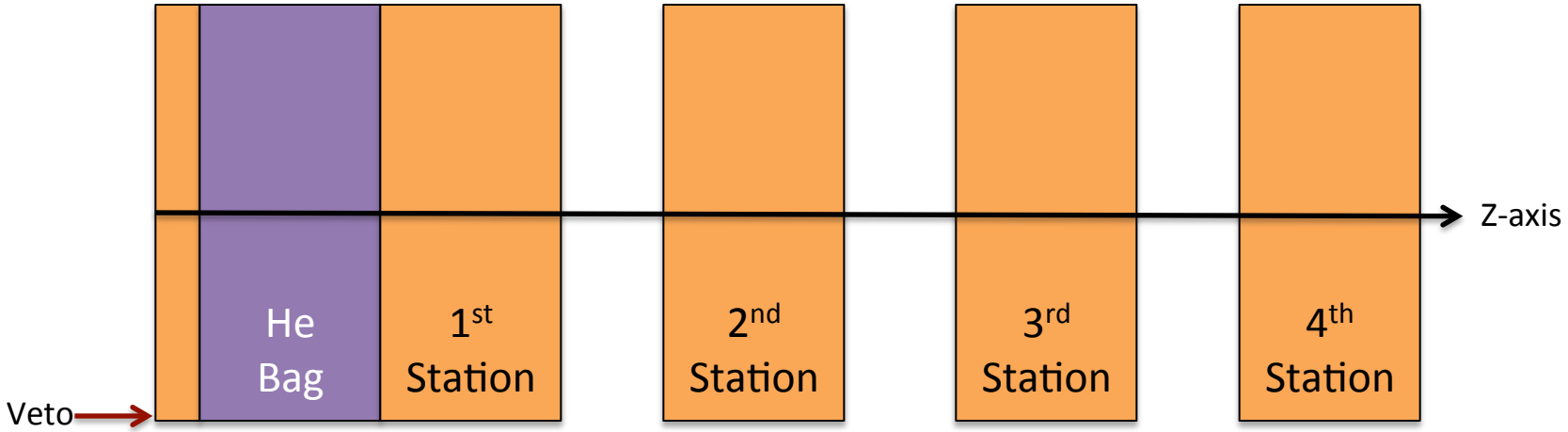
NDA Structure



- 20 modules for horz. layer
- 20 modules for vert. layer
- 40 modules for 1 station
- 4 stations (8 layers)
- 40 cm gap between stations.
- Veto & Helium bag in front of NDA.



Work for the Next Simulation

50 MeV Neutron Energy (CFD)

Examine:

- Time resolution
- Position resolution.

Simulation to be done for:

- L_1 = 100 cm
- L_2 = 100 cm

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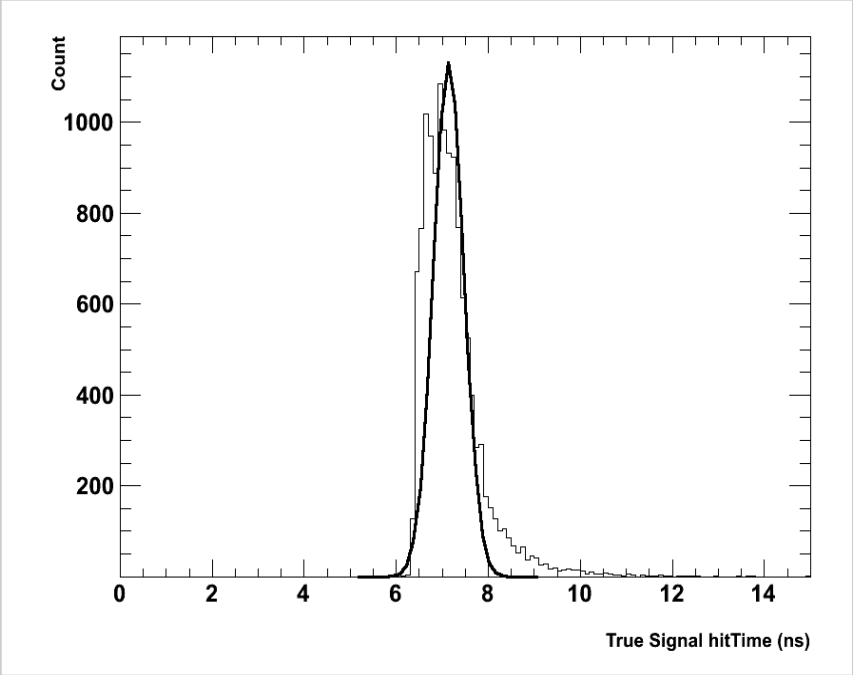
This work involves a study of grouping of hits, signal generation, propagation and attenuation.

BACKUP: Last Simulation Result[BumGon]

50 MeV Neutron Energy (VTD)

- Ee threshold = 2.0 MeV
- Center; i.e.: L_1 = 100 cm; L_2 = 100 cm



$$t_{av} = 0.5 \times \left(t_{signal1} + t_{signal2} \right)$$

$$t_{av} = 7.139 \quad ns$$

$$\sigma_{av} = 0.329 \quad ns$$

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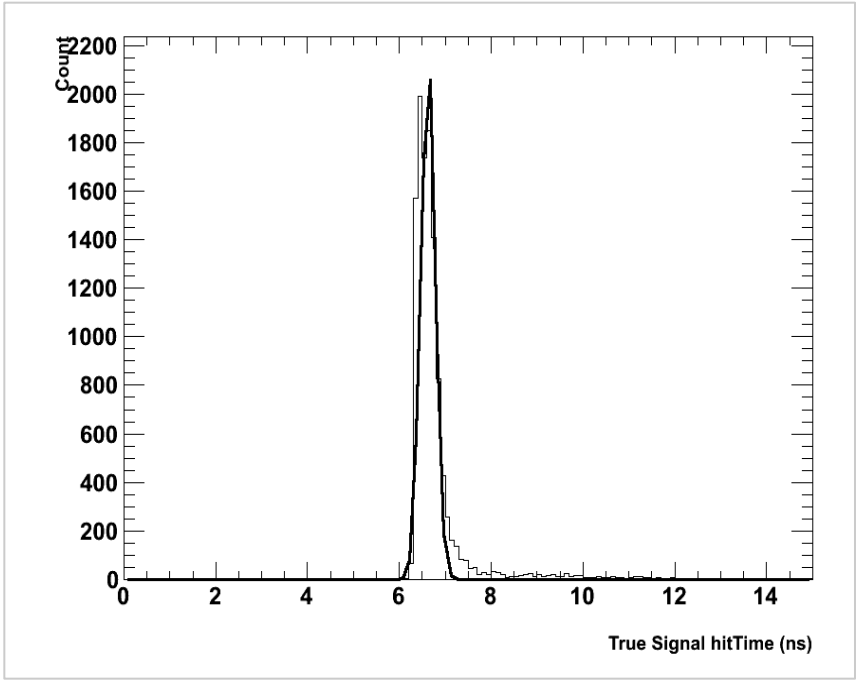

$$t_{av} = 0.5 \times \left(t_{signal1} + t_{signal2} \right)$$

$$t_{av} = 6.628 \quad ns$$

$$\sigma_{av} = 0.157 \quad ns$$